

## CURRICULUM VITAE

### Ricardo Marques Domingues

Currently an employee of the Cooperative Institute for Marine and Atmospheric Studies (CIMAS), University of Miami, working for the Atlantic Oceanographic and Meteorological Laboratory, National Oceanic and Atmospheric Administration (NOAA).



### PERSONAL DETAILS

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### RESEARCH INTEREST

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◇ Ocean Dynamics and Variability

### FORMAL EDUCATION

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**In Progress:** Master of Science in Meteorology and Physical Oceanography,  
Rosenstiel School of Marine and Atmospheric Science  
University of Miami, USA

**2010:** Bachelor of Science degree in Oceanography,  
Federal University of Bahia - UFBA, Brazil

### ADDITIONAL EDUCATION

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**2011:** GEOSOFTE Oasis Montaj (30 hours)

**2009:** Amazônia Azul: A experiência embarcada,  
Federal University of Rio Grande (120 hours)

**2007:** Continuing Education on Coastal Management,  
Federal University of Bahia, Brazil (34 hours)

**2004:** English Language  
Brazil-United States Cultural Association - ACBEU  
Salvador, BA, Brazil

### AWARDS

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✦ NOAA's Team Member of the Month, February 2015

- ✠ Admiral Franco Award, Brazilian Navy, 2009
- ✠ Outstanding student research project - Earth Sciences, Federal University of Bahia, 2007

## PROFESSIONAL EXPERIENCE

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### **NOAA's Atlantic Oceanographic Meteorological Laboratory** (2011 - Present) **Cooperative Institute for Marine and Atmospheric Studies - CIMAS** **University of Miami**

- ▷ Research Associate III (*June 2015 - Present*)
- ▷ Research Associate II (*June 2013 - Present*)
- ▷ Research Associate I (*July 2011 - July 2013*)

### **Admiral Paulo Moreira Marine Research Institute - IEAPM** (2010 - 2011) **Brazilian Navy**

- ▷ Oceanographer (*June 2010 - May 2011*)

### **Federal University of Bahia - UFBA** (2006 - 2010)

- ▷ Trainee (*December 2009 - May 2010*)  
*Advisors:* Dr. Mauro Cirano, Dr. Carlos Lentini, & Dr. Leandro Calado  
*Research Group:* The Brazilian Ocean Modeling and Observation Network - REMO
- ▷ Trainee (*October 2008 - November 2009*)  
*Advisor:* Dr. Carlos Lentini  
*Research Group:* Tropical Oceanography Research Group - GOAT
- ▷ Trainee (*June 2006 - September 2008*)  
*Advisor:* Dr. Ruy Kikuchi  
*Research Group:* Coral Reefs and Global Changes Research Laboratory - RECOR/UFBA

## KNOWLEDGE

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**Languages:** Portuguese (native language), English (fluent), and Spanish (understands)

**Programming Languages:** MATLAB (advanced), SHELL (advanced), FORTRAN (intermediate), and IDL (basic).

**OS:** LINUX/UNIX environment (advanced), Mac environment (advanced), Windows environment (advanced)

**Oceanographic Equipment:** Underwater Gliders, CTD, XBT, ADCP, and Argo

**Numerical Ocean Models:** Regional Ocean Modeling System (advanced), MERCATOR products (intermediate)

**Software:** SeaDAS (advanced), GMT (advanced), ArcGIS 9.x (intermediate), GEOSoft (intermediate), ENVI (intermediate)

**Data Management:** MySQL (intermediate), PostgreSQL (intermediate)

**Web-Design:** PHP (advanced), HTML (advanced)

## PUBLICATIONS

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**Domingues, R.,** G. Goni, F. Bringas, S.-K. Lee, H.-S. Kim, G. Halliwell, J. Dong, J. Morell, and L. Pomales (2015), Upper ocean response to Hurricane Gonzalo (2014): Salinity effects revealed by targeted and sustained underwater glider observations, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL065378.

**Domingues, R.,** G. Goni, S. Swart, and S. Dong (2014), Wind forced variability of the Antarctic Circumpolar Current south of Africa between 1993-2010, *J. Geophys. Res. Oceans*, 119, doi:10.1002/2013JC008908.

Codato, G., L. Calado, N. Martins, W. Watanabe, **R. Domingues** , and S. Jesus (2012), Acoustic prediction using a feature-oriented regional modeling system and acoustic inversion, *Proceedings of Meetings on Acoustics*, Vol. 17, p. 070052.

Oliveira, E., L. Calado, W. Watanabe, **R. Domingues** (2011), Detecção de Feições Oceanográficas a partir de Dados Orbitais: Validação de Modelos Numéricos, *A Ressurgência* (ISSN:1982-2790), v. 5, p. 18-20.

Calado, L., **R. Domingues** , W. Watanabe, G. Serrato, E. Oliveira, L. Nascimento (2012), Desenvolvimento da Técnica de previsão da Corrente do Brasil na região sudeste. *A Ressurgência* (ISSN:1982-2790), v. 6, p. 40-45.

## RESEARCH PROJECTS

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**2014 - Present: Sustained Ocean Observations with Gliders (NOAA/AOML)**

**Goal:** improve seasonal forecasts of Atlantic tropical cyclones and tropical cyclone intensification using observations collected by gliders in the Caribbean Sea.

**Website:** <http://www.aoml.noaa.gov/phod/gliders>

**2013 - Present: Mandatory Ship Reporting System 2.0 (NOAA/AOML)**

**Goal:** implement and maintain the MSR 2.0, which is jointly operated by the United States Coast Guard and the National Marine Fisheries Service and is designed to aid in the reduction of ship collisions with North Atlantic right whales.

**Website:** <https://www.rightwhalesmsr.aoml.noaa.gov>

**2011 - Present: The XBT Network (NOAA/AOML)**

**Goal:** improve the state of the ocean observing system by maintaining consistent observations along transects across all ocean basins, where expendable bathythermographs (XBTs) are used to collect temperature observations of the upper 1km of the ocean.

**Website:** [http://www.aoml.noaa.gov/phod/goos/xbt\\_network/](http://www.aoml.noaa.gov/phod/goos/xbt_network/)

**2011 - Present: Long Term Time Series of Surface Currents (NOAA/AOML)**

**Goal:** satellite-based monitoring of the spatial and temporal variability of key surface currents.

**Website:** <http://www.aoml.noaa.gov/phod/altimetry/cvar/index.php>

**2010 - 2011: Project DetecFeicoes (IEAPM)**

**Goal:** implementation of a operational methodology for detecting and tracking mesoscale ocean features at the southeast coast of Brazil using satellite data.

**2010 - 2011: Ocean Acoustic Exploration (IEAPM)**

**Goal:** enhance the international collaboration between Brasil, the European Union, and Canada in the field of ocean monitoring through acoustic methods and marine technologies.

**2009 - 2011: Oceanographic Modeling and Observation Network (UFBA/IEAPM)**

**Goal:** implement an operational oceanic forecast system based on numerical models and satellite data.

**Website:** <http://www.rederemo.org/html/index.php/welcome>

## PRESENTATIONS IN EVENTS

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- 2010** (oral presentation) - Watanabe, W., **R. Domingues**, L. Calado, L. Barreira, On the influence of the upwelling front on the acoustics propagation. Submarine Acoustics Technology Meeting (IX ETAS), Arraial do Cabo, Brazil
- 2010** (poster) - **Domingues, R.**, C. Lentini, J. Miranda, M. Cirano, and L. Calado, Investigating the Brazil Current meso-scale activity through the application of the Chaotic Theory. AGU, The Meeting of Sciences. Foz do Iguacu, Brazil
- 2009** (oral presentation) - **Domingues, R.**, C. Lentini, J. Miranda, An investigation about the Lagrangian and chaotic behavior of the Brazil Current near Cabo Frio using MODIS thermal images and complexes systems. Waves, Tides and Satellite Oceanography Symposium, Arraial do Cabo, Brazil
- 2009** (poster) - Lentini, C., J. Servain, M. Araujo, M. Silva, L. Nascimento, **R. Domingues**, and M. Cintra, How well work the Mercator products in the Southwestern Tropical Atlantic?; Project TRANSAT conference, Toulouse, France
- 2009** (poster) - Lisboa, D., C. Lentini, and **R. Domingues**, Generation of Hot Spots and Degree Heating Weeks maps to indentify regions of coral bleaching in the Southwestern Tropical Atlantic; Brazilian Remote Sensing Symposium, Natal, Brazil

## TECHNICAL WORK

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**February, 2011** - Development of “METEO processing” MATLAB® toolbox, designed to process meteorological data collected by brazilian stations. **Client:** Federal University of Bahia

**June, 2010** - Upgrade in the “ADCP ProcED” MATLAB® toolbox. **Client:** Federal University of Bahia

**Reference:** Genz, Fernando, Cirano, Mauro, and Lessa, Guilherme Camargo. (2010). ProcED: a MATLAB® package for processing ADCP estuarine data. Revista Brasileira de Geofísica, 28(2), 183-192.

**Link to the package:** <http://www.mcirano.ufba.br/ftp/pub/matlab/proced/>

**January, 2010** - Development of the “ADCP Flowquest processing” MATLAB® toolbox, designed to process ADCP data. **Client:** Belov Engenharia Ltda

**October, 2009** - Monitoring the Paraguacu River tidal cycle using ADCP and CTD measurements. **Client:** Federal University of Bahia

## EMBARKED EXPERIENCE

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**February, 2015** - **Location:** from Miami, USA, to Valencia, Spain; **Cruise Name:** February 2015 AX07 XBT transect; **Duration:** 13 days; **Institution:** National Oceanic and Atmospheric Administration

**March, 2014** - **Location:** from Barcelona, Spain, to Fort Lauderdale, USA; **Cruise Name:** March 2014 AX07 XBT transect; **Duration:** 13 days; **Institution:** National Oceanic and Atmospheric Administration

**August, 2013** - **Location:** from Barcelona, Spain, to Fort Lauderdale, USA; **Cruise Name:** August 2013 AX07 XBT transect; **Duration:** 13 days; **Institution:** National Oceanic and Atmospheric Administration

**June, 2013** - **Location:** from Newark, USA, to San Juan, Puerto Rico; **Cruise Name:** June 2013 AX10 XBT transect; **Duration:** 5 days; **Institution:** National Oceanic and Atmospheric Administration

**February, 2013** - **Location:** from Newark, USA, to San Juan, Puerto Rico; **Cruise Name:** February 2013 AX10 XBT transect; **Duration:** 5 days; **Institution:** National Oceanic and Atmospheric Administration

**December, 2012** - **Location:** from Fort Lauderdale, USA, to Cagliari, Italy; **Cruise Name:** December 2012 AX07 XBT transect; **Duration:** 13 days; **Institution:** National Oceanic and Atmospheric Administration

**July, 2012** - **Location:** from Fort Lauderdale, USA, to Cagliari, Italy; **Cruise Name:** July 2012 AX07 XBT transect; **Duration:** 13 days; **Institution:** National Oceanic and Atmospheric Administration

**March, 2012** - **Location:** from Newark, USA, to San Juan, Puerto Rico; **Cruise Name:** March 2012 AX10 XBT transect; **Duration:** 5 days; **Institution:** National Oceanic and Atmospheric Administration

**December, 2011** - **Location:** from Newark, USA, to San Juan, Puerto Rico; **Cruise Name:** December 2011 AX10 XBT transect; **Duration:** 5 days; **Institution:** National Oceanic and Atmospheric Administration

**October, 2010 - Location:** Rio de Janeiro; **Cruise Name:** Ocean Acoustics Exploration experiment; **Duration:** 4 days; **Institution:** Admiral Paulo Moreira Marine Research Institute, Brazilian Navy

**October, 2009 - Location:** Paraguaç estuary; **Description:** ADCP and CTD data collection; **Duration:** 4 days; **Institution:** Federal University of Bahia

**June, 2009 - Location:** South Atlantic; **Cruise Name:** Amazonia Azul, leg 23; **Duration:** 5 days; **Institution:** Federal University of Rio Grande

**2006 to 2008 - Location:** Bahia, Brazil; **Description:** Scientific dives as part of the activities by the Coral Reef and Global Change Research Laboratory - RECOR; **Duration:** 300 hours; **Institution:** Federal University of Bahia.